

## SOME NEW HAMPSHIRE FUNGI\*

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The state of New Hampshire, and in fact most of New England, has been an important collecting ground for considerably more than a half century. Notwithstanding this fact the botanical literature of the region contains only a meager amount of information dealing with its cryptogamic flora. For the state of New Hampshire the writer is aware of but a single paper treating to any extent the fungous flora of the state. This was an eighteen page article by the late Dr. W. G. Farlow, appearing in volume 3 of *Appalachia*, published in 1884. Here are listed a total of 107 species distributed through 63 genera, representing collections made in the vicinity of Shelburne, Mt. Washington, etc., in 1882 and 1883. Of this list, there are 13 species of Myxomycetes, 2 of Phycomycetes, 33 of Ascomycetes, 16 of Fungi Imperfecti, 6 of Smuts, 20 of Rusts, and 17 of Hymenomycetes.

Aside from this paper the literature contains only incidental reference to fungi collected in or described from the state, although abundant material probably exists in a number of different herbaria. Dr. Farlow, himself, had a summer home at Chocorua, and undoubtedly collected a wealth of material in that locality. Many other botanists have also visited the White Mountain region, and if all this material could be brought together a fairly complete list of the fungi could probably be made up.

In 1918 the writer spent about twenty weeks, from April to September, in New Hampshire, as an employee of the Bureau of Plant Industry, Washington, D. C. During this time headquarters were established at North Conway on the edge of the White Mountains, and not many miles distant from Dr. Farlow's home at Chocorua. This location gave access to an excellent

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forest region of pine, balsam, spruce, and hemlock, as well as to hardwood areas of beech, maple, birch, alder, etc. North Conway and Intervale were the chief local collecting centers. A number of trips were made to Crawford Notch in the heart of the White Mountains, and there the forests are mainly hardwoods with scattering balsam and spruce. An extensive "wind throw" of several years age is located in this region and proved to be a rich collecting ground. One trip was made to Lisbon, another to Bethlehem, and a three day excursion to the summit of Mt. Washington by way of Tuckerman Ravine and returning to Crawford Notch. Advantage was taken of every opportunity for picking up at all times any fungi observed. But only in special groups was the attempt made to collect the same species from different localities or different substrata. In fact, because of other duties, no systematic collecting was done except what might be indulged in at odd times, on holidays, Sundays, etc. Consequently, the species here listed are for the most part the ones that the ordinary collector would casually notice because of their size, coloration, or other conspicuous characteristic. Nevertheless, the number of collections made was sufficient to furnish the appended list of 195 species of fungi, every one of which is represented in the writer's herbarium by one or more collections. These species are here listed under about 77 different genera. It is a curious fact, that in this list scarcely more than a dozen species duplicate collections reported by Dr. Farlow. This is mostly explained by the fact that the species he reported belong largely to the lower groups of fungi, while the writer has collected more among the higher Basidiomycetes. A number of duplicates from these collections have been furnished the Herbarium of the United States Department of Agriculture, the Missouri Botanical Garden, the Herbarium of Dr. J. S. Weir, of Dr. H. H. York, then located at Brown University, Providence, R. I., and of the Department of Botany of the Pennsylvania State College. For this reason the writer's herbarium numbers are always cited in the list, that they may the more definitely identify duplicate collections in other herbaria.

Unless otherwise noted, the collections were made by the

writer, or in company with Dr. H. H. York, to whom the writer is much indebted for assistance. Various other individuals also contributed collections and such are credited in the list. Special thanks are due to those mycologists mentioned for determinations of various collections, as they have thereby added to the completeness and accuracy of the list.

In closing this introduction I cannot fail to mention one of the unsolved problems encountered in the spruce forests of this region. Many individuals of the red spruce (*Picea rubens*) are here attacked by a heart-wood decaying organism producing a "carbonizing" type of decay somewhat similar to that produced in structural timbers by *Trametes carnea*. The attacked heart-wood becomes reddish-brown and shrinks and cracks both longitudinally and transversely. In the final stages of decay the wood crumbles to a fine dry powder when rubbed between the thumb and finger. The fate of such trees is sooner or later to become windthrown, breaking off usually within six feet of the ground, indicating that the fungus is especially active in this region of the trunk. Although this disease was recognized early in the season and a constant lookout kept for sporophores, none were found that would in any way indicate the species responsible for the damage caused. The trees are from 5 to 15 inches in diameter, breast high, at the time they are wind thrown. That the causal organism is a member of the Polyporaceae there is little room for doubt, but its generic and specific identity remain to be determined.

#### FUNGI IMPERFECTI

##### I. ORDER SPHAEROPSIDALES

1. *Leptothyrium perichymeni* (Desm.) Sacc. On leaves of *Lonicera* sp. North Conway, No. 5266. Determined by Mrs. F. W. Patterson.
2. *Septoria acerina* Peck. On leaves of *Acer pennsylvanica*. North Conway and Willey Station. Nos. 5695 and 5696, respectively. Determined by Dr. J. J. Davis.
3. *Septoria rubi* West. On leaves of *Rubus villosus*. North Conway. No. 5697.
4. *Septoria saccharina* E. & Ev. On leaves of *Acer saccharum*. Crawford Notch. No. 5690. Determined by Dr. J. J. Davis.

## ASCOMYCETES

## 1. ORDER PERISPORIALES

5. *Microsphaera grossulariae* (Wal.) Lév. On leaves of *Ribes prostratum*. White Horse Ledge (North Conway), No. 5220; Jackson, No. 5221.

## 2. ORDER HYPOCREALES

6. *Cordyceps militaris* (L.) Link. On larva. Crawford Notch, No. 4983. Distribution recorded by Seaver<sup>1</sup> as "Massachusetts to North Dakota and Virginia."  
<sup>1</sup> North American Flora 3: 49. 1910.
7. *Hypomyces hyalinus* (Schw.) Tul. On *Amanita rubescens*. Willey Station, No. 4969; North Conway, No. 5139.
8. *Hypomyces lactiflorum* (Schw.) Tul. On *Lactarius*. North Conway, No. 4754; Intervale, No. 5142.
9. *Nectria cinnabarina* (Tode) Fr. On dead *Acer saccharum*. North Conway, No. 4612; on dead stems of *Ribes prostratum*, No. 4862.
10. *Nectria cucurbitula* Sacc. On bark of fallen *Abies balsamea*. Crawford Notch, No. 4946. Determined by Dr. F. J. Seaver.
11. *Scolecotectria scolecospora* (Bref.) Seaver. On dead branches of *Pinus strobus*. Lisbon, No. 4700. Distribution recorded by Seaver<sup>2</sup> as "New Jersey to Maryland and California." This is the fungus most often associated with the white pine blister-rust in that region.  
<sup>2</sup> Loc. cit.

## 3. ORDER SPHAERIALES

12. *Hypoxylon coccineum* Bull. On bark of *Fagus*. Crawford Notch, No. 4552. Collected by H. H. York and L. E. Newman.
13. *Hypoxylon cohaerens* (Pers.) Fr. On dead *Fagus*. North Conway, No. 5066.

## 4. ORDER PHACIDIALES

14. *Coccophacidium pini* (A. & S.) Karst. On dead limbs of *Pinus strobus*. North Conway, No. 5044.

## 5. ORDER PEZIZALES

15. *Dasyscypha agassizi* (B. & C.) Sacc. On fallen *Abies balsamea*. Crawford Notch, No. 4841; base of Mt. Washington, No. 4861. Determined by Dr. F. J. Seaver. Not an uncommon plant and usually making a profuse growth on the dead bark.
16. *Dermatea prunastri* (Pers.) Fr. On dead *Prunus* sp. North Conway, No. 5064. Collected by A. S. Rhoads.
17. *Humaria aggregata* (B. & Br.) Cooke. On the ground among pine needles. North Conway, No. 5063. Determined by Dr. F. J. Seaver who writes in part as follows: "I have seen only one other specimen of this species and that a very small one from Indiana."
18. *Tympanis pinastri* Tul. On fallen trunk of *Abies balsamea*. Crawford Notch Bridle Path to Mt. Washington, No. 5037. The determination was made by Dr. Seaver.

## 6. ORDER HELVELLALES

19. *Helvella infula* Schaeff. On the ground in moist coniferous woods. North Conway, No. 4932. Determined by Dr. Seaver. The specimens have much the appearance of a small *Gyromitra*.
20. *Leotia lubrica* (Scop.) Pers. In moist humus. North Conway, No. 5080. Rather common.
21. *Microglossum rufum* (Schw.) Underw. On rotten mossy logs. North Conway, No. 5120.
22. *Spathularia velutipes* Cooke & Farlow. On the ground in woods. Willey Station, No. 5083.
23. *Vibrissea truncorum* A. & S. On submerged wood in cold mountain stream. Tuckerman Ravine, No. 4979.

## BASIDIOMYCETES

## HEMI-BASIDIOMYCETES

## 1. ORDER USTILAGINALES

24. *Urocystis agropyri* (Preuss.) Schröt. On an undetermined grass. Kear-sarge, No. 4870.

## 2. ORDER UREDINALES

25. *Coleosporium solidaginis* (Schw.) Thüm. Aecia on needles of *Pinus resinosa*. North Conway, Nos. 4901, 4927. First observed June 12, and last collected Aug. 1. Uredinia and telia on species of *Aster*, *Solidago* and *Euthamia*, North Conway and Crawford Notch, Nos. 5694 and 5693, respectively.
26. *Cronartium comptoniae* Arth. On *Comptonia asplenifolia*. North Conway, No. 4616; on *Pinus rigida*, North Conway, No. 5126.
27. *Cronartium ribicola* Fischer. Collections are preserved as follows: On *Ribes aureum*, North Conway and Bath, Nos. 4911 and 4596 respectively, the latter collection by H. H. York; on *R. cynosbati*, Lisbon, Bartlett and Jackson, Nos. 4587, 5222 and 4617 respectively; on *R. lacustre*, Crawford Notch, Nos. 4588 and 4594; on *R. nigrum*, Bethlehem and North Conway, Nos. 4619 and 4598 respectively; on *R. oxycanthoides*, Crawford Notch, No. 4590; on *R. prostratum*, North Conway and slope of Moat Mt. at about 2600 ft. elevation, Nos. 4602 and 4640 respectively, the latter collection by P. R. Gast; on *R. triste*, Crawford Notch, Nos. 4589 and 4600; on *R. vulgare*, North Conway, No. 4601; also observed, but no collections preserved, on *R. grossularia*, at North Conway. The aecial stage on white pine is widely distributed through this part of the state. Numerous collections were made in the region of North Conway, South Conway, Intervale, and Lisbon.
28. *Gymnosporangium clavariaeforme* (Jacq.) DC. On *Juniperus communis* var. *depressa*. North Conway, No. 5001.
29. *Gymnosporangium cornutum* (Pers.) Arth. On leaves of *Sorbus (americana?)*. Intervale, No. 5689. Determined by F. D. Kern.
30. *Kuhneola uredinis* (Link) Arth. On leaves of *Rubus villosus*. Tuckerman Ravine, No. 4889.

31. *Melampsora medusae* Thüm. On leaves of *Populus tremuloides*. North Conway, No. 4657. Collected by A. S. Rhoads.
32. *Melamporella elatina* (A. & S.) Arth. On *Abies balsamea*, forming witches brooms. North Conway, No. 4890.
33. *Melamporidium betulae* (Schum.) Arth. On *Betula populifolia*. North Conway, No. 4670. Collected by A. S. Rhoads.
34. *Puccinia clematidis* (DC.) Lagerh. Aecia on leaves of *Clematis* sp. Crawford Notch, No. 4909.
35. *Puccinia fraseri* Arth. On leaves of *Hieracium* sp. North Conway, No. 5692. Determined by Prof. C. R. Orton.
36. *Puccinia graminis* Pers. Pycnia and aecia on leaves of *Berberis vulgaris*. Intervale, No. 4649.
37. *Puccinia grossulariae* (Schum.) Lagerh. Aecia on *Ribes prostratum* and *R. cynosbati*; at Crawford Notch and Jackson respectively; Nos. 4585 and 4614 respectively.
38. *Puccinia obscura* Schroet. On leaves of *Luzula*. Jackson, No. 5687. Collected by H. H. York. Determined by C. R. Orton.
39. *Puccinia pedatata* (Schw.) Arth. Aecia on leaves of *Viola saggitata*?. North Conway, No. 4908.
40. *Puccinia physostegiae* (Peck) Kuntze. Aecia on leaves of *Physostegia virginiana*. North Conway, No. 4913.
41. *Puccinia taraxaci* Plowr. On leaves of *Taraxacum officinale*. No. 5688. Collected by H. H. York.
42. *Uredinopsis mirabilis* (Peck) Magnus. On leaves of *Abies balsamea*. Franconia, No. 4980; on leaves of *Dryopteris*, Franconia, No. 5288.
43. *Uromyces caladii* (Schw.) Farlow. Aecia on *Arisaema triphyllum*. North Conway, No. 4910.
44. *Uromyces houstoniata* (Schroet.) Sheldon. Aecia on *Houstonia coerulea*. North Conway, No. 4616.

## EU-BASIDIOMYCETES

## 1. Family Tremellaceae

45. *Exidia glandulosa* (Bull.) Fr. On dead *Fagus*. North Conway, No. 5116.
46. *Sebacina calcea* (Pers.) Bres. On fallen *Pinus rigida*. Intervale, No. 5108. The fungus was determined by Dr. E. A. Burt.
47. *Tremellodon gelatinosum* (Scop.) Fr. On rotten hemlock stump. North Conway (Hales Location), No. 5158.

## 2. Family Dacryomycetaceae

48. *Calocera cornea* Fr. On log of *Acer*. Crawford Notch, No. 4746.
49. *Dacryomyces hyalinus* Quel. On hemlock(?) log. Intervale, No. 5147. Determined by Mr. C. G. Lloyd.

## 3. Family Thelephoraceae

50. *Aleurodiscus acerinus* (Pers.) v. Hohn. & Litsch. On bark of living *Fraxinus americanus*. North Conway, No. 5104.



51. *Aleurodiscus amorphus* (Pers.) Rab. On dead limbs of *Abies balsamea*. Crawford Notch Bridle Path to Mt. Washington, No. 4840.
52. *Corticium albulum* Atk. & Burt. On dead *Prunus*. North Conway, No. 5111.
53. *Corticium galactinum* (Fr.) Burt. All collections at North Conway. On coniferous logs, No. 4555; on hemlock log, No. 5131; on log of *Acer*, No. 4584; on log of *Betula populifolia*, No. 4945. No. 4555 and 4584 were determined by Dr. E. A. Burt.
54. *Corticium laetum* Karst. On dead *Alnus*. Crawford Notch (Mt. Webster), No. 5079.
55. *Corticium subgiganteum* Berk. On dead *Acer* branches. North Conway (Hales Location), No. 5062. Determined by Dr. E. A. Burt.
56. *Cyphella fasciculata* (Schw.) B. & C. On dead *Alnus*. North Conway, No. 5052.
57. *Hymenochaete abnormis* Peck. On the exposed heart-wood on the end of a log of *Picea rubens*. Crawford Notch, No. 4948. The determination was made by Dr. E. A. Burt, who, however, prefers to class the fungus in the genus *Stereum* rather than in *Hymenochaete*. It has considerable resemblance to *H. rubiginosum* (Dicks.) Lév. Spores cylindrical when mature, hyaline,  $7-12 \times 3-4 \mu$ , sometimes somewhat shorter when on basidia.
58. *Hymenochaete corrugata* (Fr.) Lév. On dead wood, probably of *Acer*. North Conway, No. 5053.
59. *Hymenochaete tabacina* (Sow.) Lév. All collections in the vicinity of North Conway. On wood of *Acer*, Nos. 4734 and 4551; on wood of *Acer rubrum*, No. 5036; on fallen hemlock, No. 5112. A coniferous host for this species is not often found.
60. *Peniophora affinis* Burt. On dead *Alnus incana*. North Conway, No. 5106.
61. *Peniophora allescheri* Bres. On dead *Populus*. North Conway, No. 4564.
62. *Peniophora carnososa* Burt. On rotten *Acer* log. North Conway, No. 4732; on fallen *Pinus rigida*, Intervale, No. 5039.
63. *Peniophora cinerea* (Fr.) Cooke. On dead *Ulmus americana*. No. 4858.
64. *Stereum ambiguum* Peck. On coniferous fence timber. North Conway, No. 4553.
65. *Stereum hirsutum* Fr. On dead *Alnus*. North Conway, No. 5009.
66. *Stereum lilacino-fuscum* (B. & C.) Burt. On dead *Acer* twigs. Nos. 5032, 5161.
67. *Stereum rameale* Schw. On fallen *Acer rubrum*. North Conway, No. 4956; on *Fagus americana*, No. 5020.
68. *Stereum rufum* Pers. On dead *Populus* twigs. North Conway, No. 4931.
69. *Stereum sanguinolentum* A. & S. On fallen *Abies balsamea*. Tuckerman Ravine, No. 4949; on *Tsuga canadensis*, North Conway, No. 4963.
70. *Stereum sulcatum* Burt. On log of *Tsuga canadensis*. North Conway, No. 5033. Determined by Dr. E. A. Burt.
71. *Stereum tuberculosum* Fr. On fallen *Acer saccharum*. Crawford Notch, No. 4582; on coniferous log, North Conway, No. 5074; on dead *Betula*, North Conway, No. 5110.

72. *Thelephora palmata* Fr. On the ground in woods. North Conway, No. 4978. With a decidedly foetid odor in fresh plants.
73. *Thelephora terrestris* (Ehrh.) Fr. On the ground and growing over mosses, twigs, etc. North Conway, No. 4873; on rotten stump of *Pinus resinosa*, No. 4958. Both collections were made by Dr. H. H. York.
74. *Tulasnella fusco-violacea* Bres. On bark of *Abies balsamea*. Crawford Notch, No. 4883. Determined by Dr. E. A. Burt. There occurs rather abundantly in this region a peculiar fungus growing exclusively on the bark of living trees of *Pinus strobus*, in which it forms orbicular patches 1 to 2.5 cm. broad. It is entirely resupinate, or at least practically so, and of a light brown color. The surface is rough with a matter, strigose pubescence. No hymenium can be found. In general appearance the fungus has the appearance that one would expect of a resupinate species of *Stereum*. However, Dr. Burt suggests that it may be a species of *Septobasidium*. Mycologists who have opportunity to collect in this region through a longer period of time than have I can render a distinct service by observing and collecting this peculiar fungus in the endeavor to obtain it in fruiting conditions. It can be found on the uninjured bark of trees 20 to 50 years old, and only where they grow in dense stands.

#### 4. Family Clavariaceae

75. *Clavaria fusiformis* Sow. Among moss in forest trail. North Conway, No. 5060. Collected by Dr. H. H. York.
76. *Clavaria krombholtzii* Fr. On the ground in woods. North Conway, No. 5172.

#### 5. Family Hydnaceae

77. *Asterodon setigera* Peck. On rotten hemlock log. North Conway, No. 5059.
78. *Hydnum coralloides* (Scop.) Fr. On end of oak log. North Conway, No. 5148.
79. *Hydnum ochraceum* Pers. On log of *Acer*. North Conway, No. 4736.
80. *Phlebia strigoso-zonata* Schw. On dead *Populus*. North Conway, No. 5133.
81. *Radulum casearium* Morgan. On log of *Populus*. North Conway, Nos. 4637, 5132.

#### 6. Family Agaricaceae

82. *Amanita flavoconia* Atk. In rich humus in woods. North Conway, Nos. 4569, 4729 and 4738.
83. *Amanita morrisii* Peck. On the ground in damp woods. North Conway, No. 4737.
84. *Amanita muscaria* (L.) Fr. On the ground under aspens. Willey Station, No. 4663.
85. *Amanita rubescens* Fr. On the ground in moist woods. North Conway, No. 4735.



86. *Armillaria mellea* Vahl. On roots of a dead *Prunus serotinus*. North Conway, No. 5095.
87. *Cantharellus cibarius* Fr. On the ground in woods. North Conway, No. 4748.
88. *Cantharellus floccosus* Schw. On the ground in woods. North Conway, Nos. 5065 and 5135.
89. *Cantharellus umbonatus* Fr. Among *Polytrichum* moss under pines. North Conway, Nos. 4749 and 4977.
90. *Clitocybe clavipes* Pers. On the ground under pines. North Conway, No. 4930.
91. *Clitocybe infundibuliformis* Bull. Among *Polytrichum* moss under alders. No. 4658.
92. *Clitocybe virens* (Scop.) Fr. On the ground under aspens. Willey Station, No. 4751.
93. *Collybia acervata* Fr. On rotten wood. Crawford Notch (Mt. Webster), No. 4965.
94. *Collybia dryophila* (Bull.) Fr. On the ground under pines. North Conway, No. 4866.
95. *Collybia platyphylla* Fr. Around an old stump. North Conway, No. 4756.
96. *Hypholoma incertum* Peck. On a lawn. North Conway, No. 4856. Collected by Dr. H. H. York.
97. *Lactarius deceptivus* Peck. On the ground in woods. North Conway, Nos. 4825 and 4851. The latter collection by Dr. A. S. Rhoads.
98. *Lactarius hygrophoroides* Peck. On the ground in woods. North Conway, No. 4757.
99. *Lentinus lepidus* Fr. On railway ties, North Conway, No. 4554; on pine stump, North Conway, No. 5105. A very common species.
100. *Lentinus ursinus* Fr. On rotten log. North Conway, No. 4871.
101. *Lepiota granulosa* (Batsch) Fr. On the ground under aspens. Willey Station, No. 4758.
102. *Lepiota procera* (Scop.) Fr. On the ground in woods. North Conway, No. 4872.
103. *Marasmius androsaceus* (L.) Fr. On needles, twigs, etc., on the ground. North Conway, No. 5134.
104. *Marasmius archyropus* Fr. On the ground in woods. Crawford Notch, No. 5090.
105. *Marasmius multifolius* Peck. On the ground under aspens. Willey Station, No. 5087.
106. *Marasmius oreades* (L.) Fr. By grassy roadside. North Conway, No. 5081.
107. *Marasmius rotula* (Scop.) Fr. On beech log. Crawford Notch, No. 5141.
108. *Marasmius subnudus* (Ellis) Peck. On the ground and on wood. North Conway, No. 5159.
109. *Mycena leaiana* Berk. On log of *Fagus*. North Conway, No. 4563.
110. *Panaeolus solidipes* Peck. On manure heap. North Conway, No. 4761.
111. *Panus rudis* Fr. On log of *Fagus*. North Conway, No. 5127.
112. *Paxillus atrotomentosus* (Batsch) Fr. On the ground by a pine stump. North Conway, Nos. 4750 and 4753.

113. *Paxillus involutus* Fr. On the ground in woods. North Conway, No. 4752.
114. *Pholiota marginella* Peck. On rotten mossy log. North Conway, No. 4762.
115. *Pholiota mycenoides* Fr. In wet, marshy ground among scattered *Sphagnum*. North Conway, No. 4943.
116. *Pleurotus ostreatus* (Jacq.) Fr. On fallen beech, Crawford Notch, No. 4855; on dead wood, Intervale, No. 5000.
117. *Pluteus cervinus* (Schaeff.) Fr. In old roadway. North Conway, No. 5153.
118. *Pluteus leoninus* (Schaeff.) Fr. On a rotten log. North Conway, No. 4929.
119. *Russula flavida* Frost. On the ground in woods. Intervale, No. 4667.
120. *Russula mariae* Peck. On the ground in a woods road. No. 5150.
121. *Tricholoma laterarium* Fr. On leaf mold in forest. North Conway, No. 5050.
122. *Trogia crispata* Fr. On dead *Betula populifolia*. North Conway, No. 4982; collected by Dr. A. S. Rhoads; on dead beech limbs, Willey Station, No. 5051.

## 7. Family Boletaceae

123. *Boletinus pictus* Peck. On the ground in woods. North Conway, No. 5136.
124. *Boletus communis* (Bull.) Fr. On the ground in woods. North Conway, No. 4972.
125. *Boletus cyanescens* (Bull.) Fr. On the ground by roadside. Crawford Notch, No. 4744.
126. *Boletus edulis* (Bull.) Fr. On the ground in woods. North Conway, No. 4960.
127. *Boletus felleus* (Bull.) Fr. On the ground in woods. North Conway, No. 4755.
128. *Boletus ferruginatus* (Batsch) Fr. On the ground in woods. North Conway, No. 4826.
129. *Boletus fumosipes* Peck. On the ground in woods. Willey Station, No. 5160.
130. *Boletus granulatus* (Bull.) Fr. On the ground under trees. North Conway, No. 5107.
131. *Boletus scaber* (Bull.) Fr. On the ground in woods. Intervale, No. 4976.
132. *Boletus subaureus* Peck. On the ground in woods, especially in trails and grassy places. North Conway, No. 4985. Common.
133. *Boletus subglabripes* Peck. On the ground in woods. North Conway, No. 4937.
134. *Boletus subtomentosus* (L.) Fr. On the ground under pines. North Conway, No. 5156.

## 8. Family Polyporaceae

135. *Daedalea unicolor* (Bull.) Fr. On dead *Acer* and also on *Fagus*. North Conway, Nos. 4842 and 4859.

136. *Favolus canadensis* Klotzsch. On beech limbs. North Conway, No. 4876.
137. *Fomes applanatus* (Pers.) Wallr. On *Acer* stump. North Conway, No. 4694.
138. *Fomes connatus* (Weinm.) Gill. On *Acer saccharinum*. North Conway, No. 4743; on *Acer rubrum*, No. 4986.
139. *Fomes conchatus* (Pers.) Fr. On dead *Acer rubrum*. North Conway, No. 4733; on dead *Acer rubrum*, Intervale, No. 4849; on living *Fraxinus americana*, North Conway, No. 4968.
140. *Fomes fomentarius* (L.) Gill. On *Betula lutea*. North Conway, No. 4724; Intervale, No. 4725.
141. *Fomes igniarius* Fr. On fallen *Populus*. North Conway, No. 4562; on fallen *Populus deltoides*, Crawford Notch, No. 4648; on *Betula lutea*, Jackson and Crawford Notch, Nos. 4727 and 4940; on *Betula populifolia*, Crawford Notch, No. 4951; on *Betula lutea*, Tuckerman Ravine, No. 4966; on dead *Betula alba*, Willey Station, No. 5085.
142. *Fomes pini* (Brot.) Lloyd. On hemlock log. North Conway, No. 4846.
143. *Fomes pinicola* (Sw.) Cooke. On *Betula lutea*. North Conway, No. 4695; on *Abies balsamea*, North Conway, No. 4704, collected by Dr. H. H. York; on dead *Prunus*, Crawford Notch, No. 4947.
144. *Fomes roseus* (A. & S.) Cooke. On dead *Tsuga canadensis*. North Conway, No. 5004.
145. *Fomes scutellatus* Schw. On dead *Alnus*. North Conway, No. 5089.
146. *Lenzites saepiaria* Fr. On rotten coniferous log. North Conway, No. 4742.
147. *Polyporus abietinus* Fr. On *Tsuga canadensis*. North Conway, No. 5008; on fallen *Abies balsamea*, Crawford Notch, No. 5121.
148. *Polyporus adustus* (Willd.) Fr. On dead *Populus*. North Conway, No. 4739; on fallen beech log, Crawford Notch, No. 4868.
149. *Polyporus anceps* Peck. The following collections at North Conway: On dead limbs of *Pinus resinosa*, No. 4865; on trunk of dead *Pinus resinosa*, No. 4988; on dead standing hemlock, No. 5026.
150. *Polyporus betulinus* (Bull.) Fr. On *Betula alba*. Crawford Notch, No. 4839.
151. *Polyporus bififormis* Klotzsch. On beech log. North Conway, No. 4957.
152. *Polyporus brumalis* (Pers.) Fr. On dead deciduous wood. North Conway, No. 5084.
153. *Polyporus chioneus* Fr. The following collections at North Conway: On dead *Populus*, No. 4926; on dead *Prunus serotinus*, No. 4941; on log of *Betula*, No. 5006.
154. *Polyporus cinnabarinus* (Jacq.) Fr. On log of *Acer*. Crawford Notch, No. 4568; on fallen *Acer saccharum*, North Conway, No. 5145, collected by Dr. H. H. York and Mr. L. E. Newman.
155. *Polyporus conchifer* (Schw.) Fr. On dead elm branches. North Conway, No. 4745.
156. *Polyporus dichrous* Fr. On dead *Alnus*. North Conway (Hales Location), No. 4987.
157. *Polyporus elegans* (Bull.) Fr. On dead wood. Crawford Notch, No. 5005.

158. *Polyporus epileucus* Fr. ex Lloyd. On fallen *Acer*. Crawford Notch, No. 5002.
159. *Polyporus guttulatus* Peck. On fallen *Abies balsamea*. On Crawford Notch trail to Mt. Webster, No. 5152.
160. *Polyporus hirsutus* (Wulf.) Fr. On fallen beech. Crawford Notch, No. 4864; also on fallen *Populus*, No. 4898.
161. *Polyporus montagnei* Fr. On the ground, probably attached to buried wood. North Conway, No. 4999.
162. *Polyporus parmagenus* Fr. On *Acer rubrum*. Intervale, No. 4650; on fallen *Populus*, Kearsarge Mt. and Crawford Notch, Nos. 4707 and 4884, respectively; on dead *Salix*, North Conway, No. 4884, collected by Dr. A. S. Rhoads.
163. *Polyporus perennis* (L.) Fr. On ground under aspens and in forest trails. Willey Station, No. 5055. Of this species larger specimens were collected than had ever before been observed by the writer, some being as much as 11 cm. broad. It is the common, brown, centrally stipitate species of forest trails and roadsides in this region.
164. *Polyporus picipes* Fr. On rotten *Abies balsamea*. Crawford Notch, No. 4934; on log of *Acer*, No. 4952. A coniferous host for this species is extremely uncommon.
165. *Polyporus pubescens* (Schum.) Fr. On dead *Acer saccharum*. Crawford Notch, No. 5113. Observed but once.
166. *Polyporus radiatus* (Sow.) Fr. On stump of *Betula lutea*. North Conway, No. 5078; on dead *Alnus*, No. 5122.
167. *Polyporus schweinitzii* Fr. On roots of pine stumps. North Conway, Nos. 4740 and 5155.
168. *Polyporus semipileatus* Peck. On dead beech limbs. North Conway, No. 4852.
169. *Polyporus semisupinus* B. & C. On dead *Alnus*. North Conway (Hales Location), No. 5093. Found but once.
170. *Polyporus sulphureus* (Bull.) Fr. On old hardwood log. North Conway, No. 4722. Collected by Dr. H. H. York.
171. *Polyporus tsugae* Murrill. On dead hemlock. Intervale, No. 4613, by Mr. J. Corliss; North Conway, No. 4620.
172. *Polyporus tulipiferus* (Schw.) Overh. On dead *Acer pennsylvanica*. Crawford Notch, No. 4583; on dead *Prunus serotinus* and also on dead beech limbs, North Conway, Nos. 4967 and 5130 respectively.
173. *Polyporus ursinus* Lloyd. On log of *Picea rubens*. North Conway, No. 6076. This species was collected in August, 1920, by Mr. Walter H. Snell. It is a rare plant though rather widely distributed in the United States.
174. *Poria attenuata* Peck. On dead hardwood. North Conway, No. 4566; on dead *Acer* limbs, No. 5171.
175. *Poria attenuata* var. *subincarnata* Peck. On dead limbs of *Tsuga canadensis*. North Conway, Nos. 5034 and 5099. This plant is not a variety of *P. attenuata* as has already been pointed out by the writer (Bull. N. Y. State Mus. 205-206; 73-74. 1919.) It is a distinct species but whether or not otherwise named I cannot say at present.

176. *Poria betulina* Murrill. On fallen *Betula populifolia*. Crawford Notch, Nos. 4565 and 5013; on *Betula alba*, No. 5025. This species has been extensively studied by the writer and will be considered more in detail in a paper soon to be published. It is common throughout the north-eastern states, but without knowing the host it is difficult to distinguish from resupinate forms of *Fomes ignarius*. The spores were originally described as "ovoid, smooth, fulvous, 4-5  $\mu$  long." They are, however, subglobose, smooth, hyaline, and measure 5-6  $\mu$  in diameter. The species is consequently misplaced in Murrill's genus *Fomitiporella*, in which the brown spores are made a generic character.
177. *Poria ferruginosa* (Schrad.) Fr. On dead limbs of *Acer*. North Conway, No. 4672; on fallen *Prunus serotinus*, Crawford Notch, No. 4971; on dead *Fagus*, Willey Station, No. 5096. Among other brown resupinate species this one is well characterized by the abundant setae, the distinctly oblong or oblong-ellipsoid hyaline spores measuring 4-5  $\times$  2-2.5  $\mu$ , and by being confined to the wood of deciduous trees.
178. *Poria fimbriata* Pers. On rotten wood. North Conway, No. 4607. The species is sometimes known as *Porothelium fimbriatum*.
179. *Poria medulla-panis* Pers. On old limbs of deciduous trees. North Conway, No. 5035.
180. *Poria nigrescens* Bres. On rotten *Betula*. North Conway, No. 4942.
181. *Poria prunicola* Murrill. On dead *Prunus*. Crawford Notch, No. 4580. This is a rather common *Poria* on dead *Prunus*, especially at the higher elevations in the vicinity of Crawford Notch. Its affinities are with *Poria betulina*. Setae are rare, but usually present.
182. *Poria subacida* Peck. On fallen *Acer rubrum*. Intervale, No. 4641; on fallen hemlock, North Conway, Nos. 4827 and 5046; on fallen *Abies balsamea*, Intervale, No. 4974; on dead *Betula*, North Conway, No. 5049; on log of *Pinus Strobus*, North Conway, No. 5097. A common and variable species.
183. *Poria tsugina* Murrill. On log of *Tsuga canadensis*. North Conway and Lisbon, Nos. 4962 and 5091 respectively.
184. *Trametes carnea* Nees. On log of *Picea mariana* and on pine log. North Conway, Nos. 4731 and 4933 respectively.
185. *Trametes heteromorpha* Fr. On fallen *Abies balsamea*. Crawford Notch, No. 5045. This species has only recently been recognized in this country (see Overholts, Polyporaceae of the Middle-Western United States, p. 74. 1915). Its occurrence in such widely separated localities as Idaho and New Hampshire argues for a wide distribution.
186. *Trametes malicola* B. & C.? On rotten log of hemlock or red spruce. North Conway, No. 5100. The specimens may belong rather under *Fomes annosus*. More recent studies indicate that the real affinities of this species are with *Fomes annosus* under which it is now included as a weathered form.
187. *Trametes mollis* Sommerf. On fallen *Acer*. Crawford Notch, No. 4608, collected by Dr. H. H. York and Mr. L. E. Newman; on fallen *Fagus* and *Acer*, Crawford Notch, No. 5129.
188. *Trametes peckii* Kalchbr. On log of *Populus grandidentata* Dundee, No. 5047.

189. *Trametes sepium* B. & C. On oak fence posts. North Conway, No. 5123.
190. *Trametes serialis* Fr. On coniferous wood. North Conway, No. 4854; on fallen *Abies balsamea*, Crawford Notch, No. 4925; on hemlock log, Lisbon, No. 5073.
191. *Trametes variiformis* Peck. On hemlock logs. North Conway, Nos. 4571 and 4605; on fallen *Picea rubens*, North Conway, No. 5076.

## ADDENDA

192. *Puccinia gnaphaliata* (Schw.) Arth. & Bisby. Aecia on *Gnaphalium* sp. North Conway, No. 5225. Collected by H. H. York. Determined by C. R. Orton, who includes the species in the genus *Allodus* as recently monographed by him. *P. investita* Schw. is given as a synonym.
193. *Pucciniastrum potentillae* Kom. Uredinia on leaves of *Potentilla tridentata*. Tuckerman Ravine, Mt. Washington, No. 5226. Determined by C. R. Orton. This species is not included in the treatment of the genus *Pucciniastrum* as given in the North American Flora. Dr. J. J. Davis records it from Wisconsin on the same host.
194. *Septoria humuli* Westend. On leaves of *Humulus*. Intervale, No. 5219. The spore measurements,  $20-30 \times 1 \mu$ , agree better with this species than with *S. lupulina* Ellis & Kell.
195. *Septoria ribis* Desm. On leaves of seedling *Ribes prostratum*. North Conway, No. 5227. Spores linear, elongate, curved or straight,  $40-60 \times 1 \mu$ . No septations are visible in the spores but the fruiting body is surely a pycnidium rather than an acervulus.

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